

REMARKS

Reconsideration of the rejection of claims 1, 3 - 12 under 35 U.S.C. 103(a) as being unpatentable over applicants admitted prior art in view of Blazek et al., is respectfully requested.

Reconsideration of the rejection of claim 2 under 35 U.S.C. 103(a) as being unpatentable over the combination of applicants admitted prior art and Blazek et al., in view of Chu et al. is respectfully requested.

Reconsideration of the rejection of claims 13-17 under 35 U.S.C. 103(a) as being unpatentable over applicants admitted prior art in view of Roesel et al., is respectfully requested.

Reconsideration of the rejection of claims 18 and 19 under 35 U.S.C. 103(a) as being unpatentable over applicants admitted prior art in view of Sato et al., is respectfully requested.

Reconsideration of the rejection of claim 22 as being inherent and obvious in view of the prior art references is respectfully requested.

Each of claims 1-12 has been rejected as being obvious in light of the Blazek reference either by itself or in light of Chu et al., and applicants admitted prior art. Each of the claims 1-12 requires first and second motor assembly's each comprising a bearing surface layer and a magnet in addition to other limitations.

In the Blazek reference a first motor assembly (the stator) has a magnet but no bearing surface layer. The second motor assembly does not have either a magnet or a bearing surface layer. With regard to the magnet, it is assumed that the Examiner would assert that the main rotor structure 60 would be the magnet as it is in many conventional motors. However in Blazek, see column 6, line 63-66, it is specifically stated,

"The main rotor structure 60 may be hollow and may be fabricated from a non-magnetic material such as plastic, stainless steel or any other non-magnetic material."

In other places it is stated that the main rotor structure 60 may be ferromagnetic but in no instance is it stated that it is a magnet. This is probably because the ferromagnetic layer 62 would be thought to interfere with a such a magnet if it existed and in fact the ferromagnetic layer 62 interacts with the stator magnet to produce the motor force usually provide by a magnet.

It is also clear that ferromagnetic layer 62 is not a bearing nor does it form a part of a bearing. Firstly, Blazek no where states that the ferromagnetic layer is a bearing or is part of a bearing. Secondly, the Examiners attention is directed to the Blazek reference column 7, lines 32-39 which states,

“Although the ferromagnetic layer 62 is shown as a continuous piece of material, some embodiments may employ numerous portions of ferromagnetic material to create the ferromagnetic layer 62. However, if numerous portions of material are used, it is desirable that the size of each portion extend at least the length of a stator coil group. Additionally, although the ferromagnetic layer 62 shown has no gaps or seams, some embodiments may have gaps or seams therein.”

It is clear that a layer with gaps or seams would not be suitable as a bearing.

Lastly, each of the drawings makes it clear that ferromagnetic layer 62 is not a bearing nor does it form a part of a bearing. Thus the Blazek reference lacks 3 of the 4 elements affirmatively recited in claims 1-12.

The essence of the present invention is that a bearing surface in a motor is of low magnetic reluctance. The fact that the examiner has cited a reference in which a motor has a low reluctance material in it does not make that a teaching to use such material as a bearing if the reference does not say so.

The Blazck et al., reference, in fact, helps demonstrate the non-obviousness of these claims. In the one reference the Examiner cites, where a motor assembly has a ferromagnetic layer, that motor assembly is 1) not a bearing and 2) it omits the usual magnet because it is not known in the art to use a ferromagnetic bearing surface layer over a magnet. In fact as pointed out in the specification of this application those skill in the art would think a ferromagnetic surface layer adjacent to a magnet would result in poorer performance of the motor, not improved performance as taught herein.

Each of claims 1-12 has limitations therein which make the second bearing surface layer a material of low magnetic reluctance. For example claim 1 recites that "the second bearing surface layer" comprises "a material that has relative magnetic permeability of x, wherein x is greater than 2". Whereas claim 8 has the limitation: "wherein the second bearing surface layer has a magnetic permeability, saturation characteristic, shape and location so that at least a portion of the second bearing surface layer is magnetically saturated by a magnetic field of the second magnet."

Each of Claims 13-17 have been rejected as being unpatentable over applicants admitted prior art in view of Roesel et al. This rejection is parallel to the rejection of Claims 1 – 12. Here the examiner has cited Roesel which has a layer with a high residual magnetism. This layer is not a bearing surface and therefore the combination resulting still does not get the high residual magnetism to be a bearing surface. It is improper to use 20/20 hind sight to use applicants teaching to pick references having one or more but less than all of the elements of a claim and combine them with no further teaching. This is what the Examiner has improperly done.

Each of Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants admitted prior art in view of Sato et al. This rejection is parallel to the rejection of Claims 1 – 17. Here the examiner has cited Sato et al. which has an anisotropic magnet. This anisotropic magnet is not a bearing surface and therefore the combination resulting still does not get the anisotropic magnet to be a bearing surface. It is improper to use 20/20 hind sight to use applicants teaching to pick references having one or more but less than all of the elements of a claim and combine them with no further teaching. This is, again, what the Examiner has improperly done.

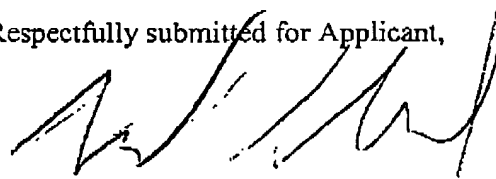
Since the references do not meet the structural limitations of the claimed device the method of claim 22 is neither inherent or obvious.

CONCLUSION

In view of the foregoing response, it is respectfully submitted that the application is in condition for allowance and accordingly, allowance of the application is respectfully requested.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment to Deposit Account 06-0923. Applicant claims small entity status. See 37 C.F.R. 1.27.

Respectfully submitted for Applicant,



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